

REMARKS

Claims 1-8 are pending in this application. Claims 1-8 stand rejected under 35 U.S.C. 103(a) as being obvious over Gringeri (U.S. Patent 6108382) in view of Tsai, et al (U.S. Patent 6,529,552).

Claims 1 and 5 have been amended to make clear that the output stream is formed by combining corresponding video frames in the input streams to form a corresponding video frame in the output data stream. The claims have been further amended to make clear that a frame in a given input stream larger than a threshold size is broken into parts. At least one part of the frame is transmitted in the interleaved output stream earlier than the corresponding video frame in the output stream. This method helps ensure that the latency of video frames for an individual input stream is not increased by forming the multiplexed output data stream. These steps are taught in the specification of the subject application at least at page 8, line 23 to page 9, line 25 and figures 5-7. No new matter has been added.

Claims Rejections – 35 U.S.C. 103(a)

Claims 1-8 stand rejected under 35 U.S.C. 103(a) as being obvious over Gringeri (U.S. Patent 6,108,382) in view of Tsai et al (U.S. Patent 6,529,552).

The rejection of Claim 1-8 as obvious over Gringeri '382 in view of Tsai '552 lacks a prima facie case of obviousness because neither Gringeri nor Tsai teaches required limitations of Claims 1-8 as amended, i.e., combining video frames from each input data stream to form a composite video frame for the output data stream and rescheduling part of a given video frame in a given individual input stream so that the part is scheduled in an earlier frame in the interleaved output stream than the composite video frame, when the given input video frame is larger than a threshold size.

The Office Action admits that Gringeri '382 does not teach rescheduling part of a video frame in an input stream to an earlier time in an output stream, when the input video frame exceeds a threshold size. (See Office Action, page 4, para. 13.) Likewise, Gringeri's method for transmitting video in an ATM network does not teach forming a composite video frame for an output data stream by combining video frames from a plurality of input data streams. This follows because Gringeri's method employs individual virtual circuits in the ATM network to carry each video stream. (See, e.g., Gringeri '382, col. 8, lines 9 to 30.) As such, each virtual circuit is independent. Thus, composite video frames are not created from the separate input streams.

Tsai '552 teaches a method for transmitting a variable bit rate compressed video stream over constant and variable capacity network connections. (See, Tsai '552, abstract.) Like Gringeri, Tsai does not describe forming a composite video frame for an output data stream by combining video frames from a plurality of input data streams. Instead, Tsai's method operates on a compressed video input stream for the network that is independent of other network traffic. (See, Tsai '552, col. 5, lines 10-44, and figs. 1-3.). Composite video frames in an output data stream are not formed from a plurality of input streams. While Tsai does teach moving excess bits above a bit rate threshold to adjacent video frames in an individual video stream, Tsai '552 does not disclose rescheduling one part of a given video frame in a given individual input stream so that the part is scheduled in an earlier composite video frame in an interleaved output data stream.

Claim 1, as amended, requires in pertinent part:

"...

- b. combining a corresponding video frame from each input data stream to form a corresponding video frame for the output data stream;
- c. for each input data stream, when a given video frame from the input data stream is larger than a threshold size, dividing the given video frame into a first part and a second part and rescheduling at least one part of the given video frame for transmission in a specified output

data stream video frame, where the specified output data stream video frame is scheduled for transmission earlier than the video frame in the output data stream corresponding to the given video frame from the input data stream...”

To establish prima facie obviousness of a claimed invention, each claim limitation must be taught or suggested by the prior art. (See, e.g., MPEP 2143.03). Because neither Gringeri ‘382 nor Tsai ‘552 teaches combining corresponding video frames from a plurality of compressed video input data streams to form a corresponding video frame for the output data stream and, when a given video frame from the input data stream is larger than a threshold size, dividing the given video frame into a first part and a second part and rescheduling at least one part of the given video frame for transmission in a specified output data stream video frame, where the specified output data stream video frame is scheduled for transmission earlier than the corresponding frame time in the output data stream, neither reference teaches a required limitation of Claim 1. Thus, a prima facie case of obviousness has not been made and Claim 1 is deemed nonobvious over any combination of Gringeri ‘382 and Tsai ‘552. Claims 2-4, which depend from Claim 1 and add further limitations, are deemed nonobvious over Gringeri ‘382 in view of Tsai ‘552 for at least the same reasons as for Claim 1.

Claim 5, as amended, includes analogous limitations to the limitations of Claim 1 cited above. Therefore, for the same reasons as described above for Claim 1, a prima facie case of obviousness has not been made and Claim 5 is deemed nonobvious over any combination of Gringeri ‘382 and Tsai ‘552. Claims 6-8, which depend from Claim 5 and add further limitations, are deemed nonobvious over Gringeri ‘382 in view of Tsai ‘552 for at least the same reasons as for Claim 1.

Applicant requests reconsideration of all pending claims and a notice of allowance. The Examiner is requested to telephone the undersigned if any matters remain outstanding so that they may be resolved expeditiously. The Commissioner is hereby authorized to charge any deficiency in the fees filed, asserted to be filed or which should have been filed herewith to our Deposit Account No. 19-4972.

Respectfully submitted,

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